

**Climatological Data for February, 1910.**  
**DISTRICT No. 8, TEXAS AND RIO GRANDE VALLEY.**

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**GENERAL CLIMATOLOGICAL CONDITIONS.**

The month was considerably colder than usual, with decidedly deficient precipitation over much the greater portion of the district. The principal feature of the weather was a severe cold wave from the 15th to the 19th, which gave the coldest weather of the month, with freezing temperature throughout the district and temperature below zero in Colorado and New Mexico, and near zero in northern Texas. It was accompanied by snow in most portions of the district and by heavy sleet in many of the coast counties.

Heavy rains occurred in extreme eastern Texas, with amounts ranging from 4 to over 6 inches, the heaviest being 10.60 inches at Lufkin, and the next heaviest, 9.76, at Nacogdoches. Within a radius of approximately 150 miles from Lufkin as a center the precipitation exceeded the normal. There was also a moderate excess in a few localities in Colorado and extreme northern New Mexico, but elsewhere there was a general and decided deficiency. The least precipitation occurred in the middle, western, and extreme southern portions of the district. At 23 stations in New Mexico and 22 in western and southwestern Texas there was either no precipitation or the amounts were too small to be measured, while at 14 other stations in New Mexico and 8 in Texas the amounts were only 0.10 inch or less.

Excessive precipitation of 2.50 inches or more in 24 consecutive hours occurred at the following Texas stations: Anahuac, 2.85; Beaumont, 3.96; Columbia, 2.90; Crockett, 3.99; Galveston, 3.74; Huntsville, 2.52; Lufkin, 5.31; and Nacogdoches, 3.80 inches. Some of the precipitation in Texas, and nearly all in New Mexico and Colorado was in the form of snow, the greatest amounts reported being 43 inches in Colorado, 45 in New Mexico, and 6.5 in Texas. The number of rainy days with 0.01 or more precipitation averaged slightly over 3 for the district, being least in New Mexico and greatest in Colorado. There was an average of 14 clear days.

**TEMPERATURE.**

The temperature was below the normal, except in portions of the Rio Grande Valley. The deficiency was greatest in the eastern portion of the district, in the region of heaviest precipitation, where the temperature ranged from 4° to over 5° below the normal. Two cold spells occurred during the month. The first overspread the district on the 3d and 4th, and the second, which was much the severer, on the 16th and 17th. During the prevalence of the latter the lowest temperatures of the month occurred throughout the district, ranging in Colorado from -17° at Blanca to -33° at Wagon Wheel Gap; in New Mexico from 10° at Newman and Noria to -27° at Tres Piedras; and in Texas from 32° at Brownsville to -1° at Waxahachie.

During the third decade the weather was generally warm, but warm weather occurred also on a number of days during the first and second decades. The highest temperatures reported were: In Colorado, 62° on the 14th at Saguache; in New Mexico, 81° on the 25th at Roswell; and in Texas, 98° on the 15th at Zapata. The local monthly means ranged from 10.6° to 27.2° in Colorado; from 15.8° to 47.6° in New Mexico; and from 39.7° to 63.6° in Texas.

**PRECIPITATION.**

The precipitation over the Rio Grande watershed was generally deficient. There was, however, a moderate excess over a few limited areas in the extreme upper portion, but south of Espanola a decided deficiency occurred, which was most marked

over the Texas stretch of the watershed. The deficiency averaged 0.10 inch in Colorado, 0.25 inch in New Mexico, and 0.98 inch in Texas. The snowfall in the mountains and upper valleys reached a maximum of 43 inches at Cumbres, Colo., and of 45 inches at Chama, N. Mex. There was very little snow over the long reach south of Mountainair, N. Mex.

In the Rio Pecos watershed the precipitation was also decidedly deficient, the deficiency ranging from a minimum of 0.21 inch in Texas to a maximum of 0.60 inch in New Mexico. The average for the watershed was less than one-half inch. The snowfall was slightly heavier than during the preceding month, the greatest amount reported being 22 inches at Corona, N. Mex. In a large number of localities in both the Rio Pecos and Rio Grande valleys there was either no precipitation or the amounts were too small to be measured.

In the Texas watersheds there was a general deficiency of precipitation, except over the Neches and the greater portion of the Sabine, although a few limited areas of the Colorado, Brazos and Trinity also received more than the normal amounts. In general, the monthly amounts increased from west to east, attaining a maximum average of 5.51 inches over the Neches watershed. A marked deficiency occurred over the coastal plains. The following are the average monthly amounts in inches for the various drainage basins: Nueces, 0.21; San Antonio, 0.73; Guadalupe, 1.55; Lavaca, 2.04; Colorado, 0.68; Brazos, 1.62; Trinity, 2.72; Neches, 5.51; Sabine, 3.54; and the coastal plains, 1.34 inch. The heaviest local rainfall was 10.60 inches at Lufkin in the Neches watershed.

**RIVER CONDITIONS AND MISCELLANEOUS.**

The rivers remained at about the same low level as during the preceding month and maintained an even flow, except the lower Trinity and the Neches and Sabine, which carried larger volumes of water. At Rockland the Neches rose from the 3d to the 11th, reaching a maximum stage of 13.8 feet on that day. The Sabine at Logansport rose several feet from the 2d to the 5th, and 6 feet on the last day of the month, when it attained a stage of 15.2 feet and was still rising.

The following has been taken from the Reclamation Record for March, 1910:

*New Mexico, Hondo Project.*—During February there has been no water in the river and none available for irrigation.

*New Mexico, Leasburg Project.*—On February 3 water was turned into the canal for the first time for irrigation in 1910. Since that time about 300 second-feet have been diverted from the river.

In portions of the district the weather has been dusty and too dry for plowing. The freeze of the 17th and 18th caused some damage to tomatoes, both in hotbeds and in cold frames, and to fall oats, but will probably be of benefit to the fruit and general crops.

**SNOWFALL IN THE MOUNTAINS.**

Mr. F. H. Brandenburg, Section Director, Colorado Section, reports as follows:

In general, the snowfall during February was less than the average, and much less than for the corresponding month last year. There were a number of sharp changes in temperature, the alternate warm and cold spells being very favorable for settling and solidifying the old snow.

Compared with the usual depth at the close of February, conditions are more favorable on the upper reaches of the Rio Grande, the average, or somewhat more than the average, depth being reported. At high altitudes the snow is well packed; at moderate elevations, where the depths are not great, the condition of the snow is favorable for early melting.

Mr. C. E. Linney, Section Director, New Mexico Section, reports as follows:

There was an increase in the amount of snow in the Rio Grande drainage area. On the south slopes of the mountains and in the valleys a great deal of the snow melted toward the close of the month and some of the streams carried a fair volume of water, but on the north slopes and in the higher mountains there remained a vast amount of compact snow. In many

places it had become almost solid ice, which will melt slowly and this gives assurance of late flow and an abundance of water in the Rio Grande and its tributaries.

In the Pecos and Southeast watersheds the depth of snow was below the average, except over the headwaters of the Pecos in San Miguel County. The mountains drained by the streams of the lower Pecos were almost without snow. The average depth of the snow in the mountains of the Rio Grande watershed was 32 inches and of the lower Rio Pecos, 6 inches.











TABLE 2.—*Daily precipitation for February, 1910. District No. 8—Continued.*

